

Photon to Electron Conversion Without Orbital Capture for Data Transfer Applications

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Introduction

There exists a fundamental limit at the point of a computer network's interface with an optical cable upon how quickly photonic waves may be translated faithfully into electrical impulses. There are two fundamental reasons for this: The first is that electrons moving through a conductive wire move more slowly than do photons; at about 10% of the speed of light, with this value varying depending upon the medium; and the fact that when photons are converted into electrons using a photovoltaic material, this process involves the capture of photons in orbitals of electrons and their re-emission as electrons, whereas they oftentimes take a circuitous route through the photovoltaic into the conducting wire.

Just as optical data transmissions through atmosphere are limited (except in the case of helical light) in their bandwidth by backward-forward atmospheric scattering which causes forward waves to blend into subsequently emitted, aft waves, thereby corrupting the data in the transmission, photons undergoing photon-to-electron conversion in a photovoltaic medium at the point of network interface undergo a similar process of scattering which limits the rate of data transfer and prevents the potential of fiber-optic cable from being exploited to the maximum. Although the use of purely optical computer systems may be a solution to this problem, a solution is called for which would enable electronic computers to make full use of the maximum theoretical data transfer rates associated with fiber-optic data transmission.

Network interface cards have been woefully limited for years and network architects have been forced to use a great many spliced fiber-optic cables running to a great many individual subsystems in order to work around this limit. There would be obvious benefits to being able to handle larger amounts of data in shorter periods of time at individual network nodes. The following proposal may also have application in the area of photovoltaics, generally, as the following proposal would increase the rate of successful conversion of photons to electrons to nearly 100%. It could be argued that this proposal takes the logic of solar accumulators which shunt large amounts of light into smaller spaces to the theoretical limit.

Abstract

Photons may be faithfully converted into electrons in such a way so as to preserve most of their properties as well as, importantly, their sequence, by forcing the photons, subsequent to their exit from conventional fiber, to follow a path along the edge of a two-dimensional material which conducts only along the edge. This edge would be subjected to a strong, hyperfocused magnetic field from both above and below which would not only guide the photons, but slow the photons and make their conversion into electrons more

likely as the same area is influenced from the remaining side by a series of oscillating protons in a series of specialized proton traps of the sort previously described by this author intended for enabling the entanglement of photons. These traps each feature a single proton oscillated within a small space by alternating Coulomb Force exerted by an external crystalline structure which is acoustically alternated. Although the “edge” material would not truly be conducting the light, the light would be channeled so as to fly freely, parallel with and in close proximity to the edge prior to the conversion process until its mass increases sufficiently for it to come under the direct influence of the material and to truly be conducted by it. Although this process is rapid, it is not instantaneous as many believe. This may be understood and visualized by the reader through the metaphor of an automobile which can be adapted to become a rail-based vehicle driving along the rail prior to hooking up to it and becoming guided by it directly.

Each individual trapped proton would introduce a Higgs Field as a consequence of its proximity and its oscillation which, when coupled with the reduced speed of the photon and the natural ability of the quantum magnetism to act as a Higgs carrier, would result in the reliable conversion of the photons into electrons. Importantly, photons may remain on a linear trajectory as they undergo mass uptake and become electrons. They are never captured in the orbit of an atom and consequently retain their unique characteristics and their original sequence.

After the conversion process is complete, a process which might take place over a distance of 15-20 microns, the electrons enter a traditional electrical conducting wire.

Conclusion

Data transfer rates could be extraordinarily improved with respect individual network interfaces by utilizing this approach.